

COASTAL FISH & WILDLIFE HABITAT RATING FORM

Name of Area: **Huckleberry Island**
Designated: **November 15, 1987**
County: **Westchester**
Town(s): **New Rochelle**
7½' Quadrangle(s): **Mount Vernon, NY**

Score **Criterion**

- 25** Ecosystem Rarity (ER)
 Relatively undisturbed, rocky, wooded island, unusual in the New York City metropolitan area (Manhattan Hills ecological region).
- 0** Species Vulnerability (SV)
 No endangered, threatened or special concern species reside in the area.
- 0** Human Use (HU)
 No significant fish or wildlife related human use of the area.
- 12** Population Level (PL)
 One of only 4 large heronries active in the Manhattan Hills ecological region; geometric mean: $(9 \times 16)^{1/2}$.
- 1.2** Replaceability (R)
 Irreplaceable

SIGNIFICANCE VALUE = [(ER + SV + HU + PL) X R] = **44**

SIGNIFICANT COASTAL FISH AND WILDLIFE HABITATS PROGRAM A PART OF THE NEW YORK COASTAL MANAGEMENT PROGRAM

BACKGROUND

New York State's Coastal Management Program (CMP) includes a total of 44 policies which are applicable to development and use proposals within or affecting the State's coastal area. Any activity that is subject to review under Federal or State laws, or under applicable local laws contained in an approved local waterfront revitalization program will be judged for its consistency with these policies.

Once a determination is made that the proposed action is subject to consistency review, a specific policy aimed at the protection of fish and wildlife resources of statewide significance applies. The specific policy statement is as follows: "Significant coastal fish and wildlife habitats will be protected, preserved, and, where practical, restored so as to maintain their viability as habitats." The New York State Department of Environmental Conservation (DEC) evaluates the significance of coastal fish and wildlife habitats, and following a recommendation from the DEC, the Department of State designates and maps specific areas. Although designated habitat areas are delineated on the coastal area map, the applicability of this policy does not depend on the specific location of the habitat, but on the determination that the proposed action is subject to consistency review.

Significant coastal fish and wildlife habitats are evaluated, designated and mapped under the authority of the Coastal Management Program's enabling legislation, the Waterfront Revitalization and Coastal Resources Act (Executive Law of New York, Article 42). These designations are subsequently incorporated in the Coastal Management Program under authority provided by the Federal Coastal Zone Management Act.

This narrative constitutes a record of the basis for this significant coastal fish and wildlife habitat's designation and provides specific information regarding the fish and wildlife resources that depend on this area. General information is also provided to assist in evaluating impacts of proposed activities on parameters which are essential to the habitat's values. This information is to be used in conjunction with the habitat impairment test found in the impact assessment section to determine whether the proposed activities are consistent with this policy.

DESIGNATED HABITAT: HUCKLEBERRY ISLAND

HABITAT DESCRIPTION:

Huckleberry Island is located in western Long Island Sound, approximately three-fourths of one mile east of Davids Island, in the City of New Rochelle, Westchester County (7.5' Quadrangle: Mount Vernon, N.Y.).

The fish and wildlife habitat is the undeveloped portion of this rocky, wooded island, comprising approximately 10 acres. The habitat consists of rocky shoreline and mostly deciduous forest with virtually no shrubs or herbaceous growth under the canopy. Huckleberry Island is privately owned, but development is limited to a dock and a few small buildings at the western end.

FISH AND WILDLIFE VALUES:

Huckleberry Island provides an undisturbed upland environment for wildlife that is rare in coastal portions of the New York City metropolitan area. The primary significance of this habitat is its use for nesting by relatively large numbers of colonial waterbirds, one of only about 4 such concentration areas in the Manhattan Hills ecological region and the largest colonial waterbird rookery in western Long Island Sound. This nesting area probably accounts for many of the egrets and night herons seen in lower Westchester County, and on the opposite shore of Long Island. The Huckleberry Island heronry was discovered in 1975 and during the ensuing four years, estimated numbers of nesting adults included 6-28 great egrets, 10-88 snowy egrets and 16-62 black-crowned night herons (population sizes generally increased during this period). The area was also surveyed in 1983, 1985 and 1987. In 1987, there were an estimated 20 great egrets, 609 snowy egrets and 254 black-crowned night herons making it one of the largest black-crowned night heron colonies in New York State during that year. A colony of double-crested cormorants was discovered in 1986 making this area the sixth known colony in New York State. In 1986 and 1987, an estimated 40 and 184, respectively, nesting adults were observed here.

In addition to the heron and cormorant populations, Huckleberry Island has significant nesting colonies of herring gull and great black-backed gull. In 1987, an estimated 1000 nesting herring gulls and 400 nesting great black-backed gulls were observed here. The great egrets and snowy egrets tend to nest in the tops of densely crowned trees. Black-crowned night herons appear to nest in the lower extent of the forest canopy and double-crested cormorants nest in either the upper branches of small trees along the forest edge or at the tops of the larger trees. Most of the gulls nested near the edge of the rocks along the island's perimeter (mostly at the north end). Other possible nesting birds include green heron and little blue heron.

The rocky shoreline of Huckleberry Island supports a marine rocky intertidal community comprising one of the most southerly occurrences of this community type on the North Atlantic Coastline.

IMPACT ASSESSMENT:

A **habitat impairment test** must be met for any activity that is subject to consistency review under federal and State laws, or under applicable local laws contained in an approved local waterfront revitalization program. If the proposed action is subject to consistency review, then the habitat protection policy applies, whether the proposed action is to occur within or outside the designated area.

The specific **habitat impairment test** that must be met is as follows.

In order to protect and preserve a significant habitat, land and water uses or development shall not be undertaken if such actions would:

- ! destroy the habitat; or,
- ! significantly impair the viability of a habitat.

Habitat destruction is defined as the loss of fish or wildlife use through direct physical alteration, disturbance, or pollution of a designated area or through the indirect effects of these actions on a designated area. Habitat destruction may be indicated by changes in vegetation, substrate, or hydrology, or increases in runoff, erosion, sedimentation, or pollutants.

Significant impairment is defined as reduction in vital resources (e.g., food, shelter, living space) or change in environmental conditions (e.g., temperature, substrate, salinity) beyond the tolerance range of an organism. Indicators of a significantly impaired habitat focus on ecological alterations and may include but are not limited to reduced carrying capacity, changes in community structure (food chain relationships, species diversity), reduced productivity and/or increased incidence of disease and mortality.

The *tolerance range* of an organism is not defined as the physiological range of conditions beyond which a species will not survive at all, but as the ecological range of conditions that supports the species population or has the potential to support a restored population, where practical. Either the loss of individuals through an increase in emigration or an increase in death rate indicates that the tolerance range of an organism has been exceeded. An abrupt increase in death rate may occur as an environmental factor falls beyond a tolerance limit (a range has both upper and lower limits). Many environmental factors, however, do not have a sharply defined tolerance limit, but produce increasing emigration or death rates with increasing departure from conditions that are optimal for the species.

The range of parameters which should be considered in applying the habitat impairment test include but are not limited to the following:

1. physical parameters such as living space, circulation, flushing rates, tidal amplitude, turbidity, water temperature, depth (including loss of littoral zone), morphology, substrate type, vegetation, structure, erosion and sedimentation rates;
2. biological parameters such as community structure, food chain relationships, species diversity, predator/prey relationships, population size, mortality rates, reproductive rates, meristic features, behavioral patterns and migratory patterns; and,
3. chemical parameters such as dissolved oxygen, carbon dioxide, acidity, dissolved solids, nutrients, organics, salinity, and pollutants (heavy metals, toxics and hazardous materials).

Although not comprehensive, examples of generic activities and impacts which could destroy or significantly impair the habitat are listed below to assist in applying the habitat impairment test to a proposed activity.

Any activity that would disturb the Huckleberry Island waterbird colony during the nesting period (mid-March - August), including significant pedestrian traffic, low-flying aircraft, recreation vehicle use (e.g., boat-landings and nearby boat traffic), would significantly impair the habitat. Freedom from human disturbance while early spring roosts are established and maintained may also be critical to colony use in the ensuing breeding season.

Removal of the island's upland forest habitat would have a significant impact on heron populations in the New York City and Long Island Sound area. Disturbance or elimination of preferred wetland feeding areas (possibly distant, but poorly documented) may also affect birds nesting at Huckleberry Island. Introduction or attraction of mammalian predators, including pet animals, into nesting areas could also be detrimental to the colonial bird populations. Management of the upland forest areas in order to maintain a high number and diversity of nest sites may be desirable under carefully controlled conditions.

KNOWLEDGEABLE CONTACTS:

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